



US007019784B1

(12) **United States Patent**  
**Shibuya et al.**

(10) **Patent No.:** **US 7,019,784 B1**  
(45) **Date of Patent:** **Mar. 28, 2006**

(54) **INFORMATION PROCESSING APPARATUS**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/342,012**

(22) Filed: **Jun. 28, 1999**

(30) **Foreign Application Priority Data**

Jun. 30, 1998 (JP) ..... 10-184360

(51) **Int. Cl.**  
**H04N 5/225** (2006.01)

(52) **U.S. Cl.** ..... **348/373**; 348/207.1

(58) **Field of Classification Search** ..... 348/207.1,  
348/373, 552; D14/317

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D363,471 S \* 10/1995 Shima et al. .... D14/106  
5,491,507 A \* 2/1996 Umezawa et al. .... 348/14.02  
5,708,853 A 1/1998 Sanemitsu  
D391,590 S \* 3/1998 Sumita ..... D16/202  
5,748,441 A \* 5/1998 Loritz et al. .... 361/683  
5,801,919 A 9/1998 Griencewic  
5,880,928 A 3/1999 Ma  
5,898,600 A \* 4/1999 Isashi ..... 708/105  
5,903,706 A \* 5/1999 Wakabayashi et al. .... 386/117  
6,118,485 A \* 9/2000 Hinoue et al. .... 348/373

6,141,052 A \* 10/2000 Fukumitsu et al. .... 348/373  
6,323,902 B1 \* 11/2001 Ishikawa ..... 348/373  
6,396,924 B1 \* 5/2002 Suso et al. .... 379/433.13  
6,417,884 B1 \* 7/2002 Chang et al. .... 348/373  
6,445,417 B1 \* 9/2002 Yoshida et al. .... 348/374

**FOREIGN PATENT DOCUMENTS**

DE 298 14 998 11/1998  
EP 0 802 475 10/1997

**OTHER PUBLICATIONS**

Anon.: "Camera Tilt Mechanism" IBM Technical Disclosure Bulletin, vol. 39, No. 4, Apr. 1996, pp. 311-313, XP000587510.

\* cited by examiner

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(57) **ABSTRACT**

The invention provides an information processing apparatus wherein a CCD video camera incorporated therein is prevented from being damaged and can fetch an image not only from the front but also from above and from the rear of the information processing apparatus. An image pickup section in which a CCD video camera is accommodated is supported at the opposite end portions thereof for turning motion on a display section so that the CCD video camera can be pivoted so as to be directed forwardly, upwardly and rearwardly. A recess is formed in a body to allow turning motion of the video camera when the display section is pivotally closed on the body.

**2 Claims, 15 Drawing Sheets**

